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<110> SHINTANI et al.

<120> MEDICINAL USE OF MIP-3a INHIBITOR AND METHOD OF SCREENING  
BRAIN/NERVE CELL PROTECTIVE AGENT

<130> 20039.0001USWO

<140> 10/547,532

<141> 2005-08-31

<150> PCT/JP2004/002774

<151> 2004-03-04

<150> JP 2003-056885

<151> 2003-03-04

<150> JP 2003-106247

<151> 2003-04-10

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<170> PatentIn version 3.1

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                               Met Asn Phe Thr
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gag gcc aac tac gga atg gaa gat tat act ggc tca gat tac tct atg      402
Glu Ala Asn Tyr Gly Met Glu Asp Tyr Thr Gly Ser Asp Tyr Ser Met
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ttt cca gag acc gag cca tgc tct ctg caa gag gtc aga gac ttc acc      450
Phe Pro Glu Thr Glu Pro Cys Ser Leu Gln Glu Val Arg Asp Phe Thr
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aag gtg ttc gtg cca atc gcc tac tcc tta atc tgt gtc ttt ggc ctc      498
Lys Val Phe Val Pro Ile Ala Tyr Ser Leu Ile Cys Val Phe Gly Leu
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ctt ggc aat att atg gtg gtg ata acc ttt gcc ttc tac aag aaa gcc      546
Leu Gly Asn Ile Met Val Val Ile Thr Phe Ala Phe Tyr Lys Lys Ala
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agg tcc atg act gac gtc tac cta ttg aac atg gcc atc aca gac ata      594
Arg Ser Met Thr Asp Val Tyr Leu Leu Asn Met Ala Ile Thr Asp Ile
70                               75                               80
ctc ttt gtc ctc acc cta cca ttc tgg gca gtt act cat gcc act gac      642
Leu Phe Val Leu Thr Leu Pro Phe Trp Ala Val Thr His Ala Thr Asp
85                               90                               95                               100
act tgg atc ttt ggc aac acg atg tgt aaa ctg atg aaa ggc acg tat      690
Thr Trp Ile Phe Gly Asn Thr Met Cys Lys Leu Met Lys Gly Thr Tyr
105                               110                               115
gcg gtc aac ttt aac tgt ggg atg ctg ctc ctg gcc tgt atc agc atg      738
Ala Val Asn Phe Asn Cys Gly Met Leu Leu Leu Ala Cys Ile Ser Met
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gac cgg tac att gcc atc gtc cag gcg acc aaa tct ttc cgg gta cgc      786
Asp Arg Tyr Ile Ala Ile Val Gln Ala Thr Lys Ser Phe Arg Val Arg
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tcc aga aca ctg acg cac agt aag gtc atc tgt ctg acg gtg tgg ttc      834
Ser Arg Thr Leu Thr His Ser Lys Val Ile Cys Leu Thr Val Trp Phe
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gtt tcc atc atc atc tca agc ccc aca ttc ttc ttc aac aag caa tac      882
Val Ser Ile Ile Ile Ser Ser Pro Thr Phe Phe Phe Asn Lys Gln Tyr
165                               170                               175                               180
aag ctg cag ggc cgt gat gtc tgc gag cct cag tac aag ctc gtc tcg      930
Lys Leu Gln Gly Arg Asp Val Cys Glu Pro Gln Tyr Lys Leu Val Ser
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gag ccc atc acg tgg aaa ctg ctg ggc atg gga ctc gag ctg ctc ttt      978
Glu Pro Ile Thr Trp Lys Leu Leu Gly Met Gly Leu Glu Leu Leu Phe
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ggc ttc ttc atc cct ttg ctg ttt atg gtg ttc tgt tac ctg ttc atc      1026
Gly Phe Phe Ile Pro Leu Leu Phe Met Val Phe Cys Tyr Leu Phe Ile
215                               220                               225
atc aag acc ttg gtg cag gcc cag aat tcc aag agg cac aga gcc atc      1074
Ile Lys Thr Leu Val Gln Ala Gln Asn Ser Lys Arg His Arg Ala Ile
230                               235                               240
cga gtc gtg att gct gtg gtt ctc gtg ttc ctg gct tgt cag atc cct      1122
Arg Val Val Ile Ala Val Val Leu Val Phe Leu Ala Cys Gln Ile Pro
245                               250                               255                               260
cac aac atg gtc ctc ctc gtg act gca gcc aac acg ggc aaa atg ggc      1170
His Asn Met Val Leu Leu Val Thr Ala Ala Asn Thr Gly Lys Met Gly
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gag gtc ctg gct ttc ctg cac tgc tgt ctc aac ccc gtg ttg tat gcc	1266
Glu Val Leu Ala Phe Leu His Cys 300 Cys Leu Asn Pro Val Leu Tyr Ala	
ttc att gga cag aaa ttc aga agc tac ttc atg aag atc atg aag gat	1314
Phe Ile Gly Gln Lys Phe Arg 315 Ser Tyr Phe Met Lys 320 Ile Met Lys Asp	
gtg tgg tgt atg agg agg aag agc aag gtg cct acc ttc ttc tgt gcc	1362
Val Trp Cys Met Arg Arg Lys Ser Lys Val Pro 335 Thr Phe Phe Cys Ala 340	
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Arg Val Tyr Ser Glu Ser Tyr Ile Ser Arg 350 Gln Thr Ser Glu Thr Val 355	
gaa aat gac aac gca tcg tcc ttt acc atg taa cacgagagca caaagcagca	1463
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Val Phe Gly Leu Leu Gly Asn 55 Ile Met Val Val Ile Thr Phe Ala Phe
Tyr Lys Lys Ala Arg Ser 70 Met Thr Asp Val Tyr 75 Leu Leu Asn Met Ala 80
Ile Thr Asp Ile Leu Phe Val Leu Thr Leu Pro Phe Trp Ala Val Thr 95
His Ala Thr Asp 100 Thr Trp Ile Phe Gly Asn Thr Met Cys Lys 110 Leu Met
Lys Gly Thr Tyr Ala Val Asn Phe 120 Asn Cys Gly Met Leu 125 Leu Ala
Cys Ile Ser Met Asp Arg Tyr 135 Ile Ala Ile Val Gln Ala Thr Lys Ser
Phe Arg Val Arg Ser Arg 150 Thr Leu Thr His Ser 155 Lys Val Ile Cys Leu 160
Thr Val Trp Phe Val 165 Ser Ile Ile Ile Ser 170 Ser Pro Thr Phe Phe 175
Asn Lys Gln Tyr 180 Lys Leu Gln Gly Arg Asp Val Cys Glu Pro Gln Tyr 190
Lys Leu Val Ser Glu Pro Ile Thr Trp Lys Leu Leu Gly Met Gly Leu 205
Glu Leu Leu Phe Gly Phe Phe 215 Ile Pro Leu Leu Phe 220 Met Val Phe Cys
Tyr Leu Phe Ile Ile Lys Thr Leu Val Gln Ala Gln Asn Ser Lys Arg 240
His Arg Ala Ile Arg 245 Val Val Ile Ala Val Val Leu Val Phe Leu Ala 255
Cys Gln Ile Pro 260 His Asn Met Val Leu 265 Leu Val Thr Ala Ala Asn Thr
Gly Lys Met Gly Arg Ser Cys Ser 280 Ala Glu Lys Ala Leu Ala Tyr Ala
Arg Asn Val Ala Glu Val Leu 295 Ala Phe Leu His Cys 300 Cys Leu Asn Pro

Val	Leu	Tyr	Ala	Phe	Ile	Gly	Gln	Lys	Phe	Arg	Ser	Tyr	Phe	Met	Lys
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Phe	Phe	Cys	Ala	Arg	Val	Tyr	Ser	Glu	Ser	Tyr	Ile	Ser	Arg	Gln	Thr
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ttcggagctc agcgtttctt tgggaaacg atg aat ttc acc gag gcc aac tac	173
	Met Asn Phe Thr Glu Ala Asn Tyr
	1 5
gga atg gaa gat tat act ggc tca gat tac tct atg ttt cca gag acc	221
Gly Met Glu Asp Tyr Thr Gly Ser Asp Tyr Ser Met Phe Pro Glu Thr	
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Glu Pro Cys Ser Leu Gln Glu Val Arg Asp Phe Thr Lys Val Phe Val	
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cca atc gcc tac tcc tta atc tgt gtc ttt ggc ctc ctt ggc aat att	317
Pro Ile Ala Tyr Ser Leu Ile Cys Val Phe Gly Leu Leu Gly Asn Ile	
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atg gtg gtg ata acc ttt gcc ttc tac aag aaa gcc agg tcc atg act	365
Met Val Val Ile Thr Phe Ala Phe Tyr Lys Lys Ala Arg Ser Met Thr	
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gac gtc tac cta ttg aac atg gcc atc aca gac ata ctc ttt gtc ctc	413
Asp Val Tyr Leu Leu Asn Met Ala Ile Thr Asp Ile Leu Phe Val Leu	
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acc cta cca ttc tgg gca gtt act cat gcc act gac act tgg atc ttt	461
Thr Leu Pro Phe Trp Ala Val Thr His Ala Thr Asp Thr Trp Ile Phe	
	90 95 100
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Gly Asn Thr Met Cys Lys Leu Met Lys Gly Thr Tyr Ala Val Asn Phe	
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aac tgt ggg atg ctg ctc ctg gcc tgt atc agc atg gac cgg tac att	557
Asn Cys Gly Met Leu Leu Leu Ala Cys Ile Ser Met Asp Arg Tyr Ile	
	125 130 135
gcc atc gtc cag gcg acc aaa tct ttc cgg gta cgc tcc aga aca ctg	605
Ala Ile Val Gln Ala Thr Lys Ser Phe Arg Val Arg Ser Arg Thr Leu	
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acg cac agt aag gtc atc tgt ctg acg gtg tgg ttc gtt tcc atc atc	653
Thr His Ser Lys Val Ile Cys Leu Thr Val Trp Phe Val Ser Ile Ile	
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Ile Ser Ser Pro Thr Phe Phe Phe Asn Lys Gln Tyr Lys Leu Gln Gly	
	170 175 180
cgt gat gtc tgc gag cct cag tac aag ctc gtc tcg gag ccc atc acg	749
Arg Asp Val Cys Glu Pro Gln Tyr Lys Leu Val Ser Glu Pro Ile Thr	
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Trp Lys Leu Leu Gly Met Gly Leu Glu Leu Leu Phe Gly Phe Phe Ile	
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Val Gln Ala Gln Asn Ser Lys Arg His Arg Ala Ile Arg Val Val Ile	
235 240 245	
gct gtg gtt ctc gtg ttc ctg gct tgt cag atc cct cac aac atg gtc	941
Ala Val Val Leu Val Phe Leu Ala Cys Gln Ile Pro His Asn Met Val	
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ctc ctc gtg act gca gcc aac acg ggc aaa atg ggc cgc agc tgc agc	989
Leu Leu Val Thr Ala Ala Asn Thr Gly Lys Met Gly Arg Ser Cys Ser	
265 270 275 280	
gcc gag aaa gcc ctc gcc tac gcc agg aat gtg gct gag gtc ctg gct	1037
Ala Glu Lys Ala Leu Ala Tyr Ala Arg Asn Val Ala Glu Val Leu Ala	
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Phe Leu His Cys Cys Leu Asn Pro Val Leu Tyr Ala Phe Ile Gly Gln	
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Lys Phe Arg Ser Tyr Phe Met Lys Ile Met Lys Asp Val Trp Cys Met	
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Glu Ser Tyr Ile Ser Arg Gln Thr Ser Glu Thr Val Glu Asn Asp Asn	
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